

09/914947  
518 Rec'd PCT/PTO 6 6 SEP 2001

Atty. Dkt. No. 053694-0112

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: David John Edwards et al.  
Title: DEGENERATE MODE COMBINER  
Appl. No.: To Be Assigned  
Filing Date: September 6, 2001  
Examiner: Unassigned  
Art Unit: Unassigned

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Box PATENT APPLICATION  
Washington, D.C. 20231

Sir:

Prior to examination of the present Application, Applicants respectfully request that the application be amended as follows:

**In The Claims:**

In accordance with 37 C.F.R. § 1.21, please substitute for claims 5-11 the following rewritten versions of the same claims, as amended. The changes are shown explicitly in the attached "Versions with Markings to Show Changes Made."

5. (Amended) A wave device according to claim 2, wherein the plate is a polygon having an even number of sides and each respective pair of inputs is connected across an opposing pair of sides.
6. (Amended) A wave device according to claim 2, wherein the plate is circular and each respective pair of inputs is connected to the plate across a diameter of the plate.
7. (Amended) A wave device according to claim 1, wherein the output is positioned at substantially the antinode of the device.

8. (Amended) A wave device according to claim 1, wherein the distance between a pair of inputs equals an integer number of the wave length of the wave transmitted by the inputs.
9. (Amended) A wave device according to claim 1, further comprising power dividers for providing the pairs of inputs from the signal sources.
10. (Amended) A wave device according to claim 1, further comprising one or more additional pairs of inputs for setting up additional respective standing waves.
11. (Amended) A method of operating the wave device according to claim 1, as a splitter, the method providing a power input at the output of the wave device and receiving divided power output from the first and second pairs of inputs.

002.633868.1

REMARKS

Applicants respectfully request that the foregoing amendments be made prior to examination of the present application.

Respectfully submitted,

Date September 6, 2001

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**Versions with Markings to Show Changes Made**

5. (Amended) A wave device according to claim 2, [3 or 4] wherein the plate is a polygon having an even number of sides and each respective pair of inputs is connected across an opposing pair of sides.
6. (Amended) A wave device according to claim 2, [3 or 4] wherein the plate is circular and each respective pair of inputs is connected to the plate across a diameter of the plate.
7. (Amended) A wave device according to [any preceding claim] claim 1, wherein the output is positioned at substantially the antinode of the device.
8. (Amended) A wave device according to [any preceding claim] claim 1, wherein the distance between a pair of inputs equals an integer number of the wave length of the wave transmitted by the inputs.
9. (Amended) A wave device according to [any preceding claim] claim 1, further comprising power dividers for providing the pairs of inputs from the signal sources.
10. (Amended) A wave device according to [any preceding claim] claim 1, further comprising one or more additional pairs of inputs for setting up additional respective standing waves.
11. (Amended) A method of operating the wave device [of any preceding claim] according to claim 1, as a splitter, the method providing a power input at the output of the wave device and receiving divided power output from the first and second pairs of inputs.